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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,540

09/14/2005

Helmut Schon

4405

7590

04/12/2007

Max Fogiel
44 Maple Court
Highland Park, NJ 08904

EXAMINER

RIDDLE, KYLE M

ART UNIT

PAPER NUMBER

3748

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/551,540

Applicant(s)

SCHON ET AL.

Examiner

Kyle M. Riddle

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 8 and 19 appear to have the word "claims" deleted from the amended claims creating confusion in dependency of the two claims. Based on the original claims as filed, the examiner has taken the position that both claim 8 and claim 19 depend from claim 1, claim 1 being the only independent claim.
2. Claims 3-5, 7, 8, and 17 recite the limitation "the bolt" in each of the claims. Each depend from claim 1, but the first mention of that limitation is in independent claim 2. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 9 recites the limitation "the cam disks" in claim 9, lines 1 and 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 10 recites the limitation "the slide" in claim 10, line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 15 recites the limitation "the transmission elements" in claim 15, line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.
6. Claims 3-12, 15-17, 19-22 are objected to because of the following informalities:
"claims" should read --claim--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-6, 8-16, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Morr (U.S. Patent 6,792,903).

Re claims 1-3, Morr discloses a variable valve lift device comprising one or more cams on a camshaft 28 driving an oscillating connecting link or lifting lever 4 whose axis of rotation can be displaced parallel to itself along an adjustment curve (column 1, lines 47-53, column 3, lines 1-12 lines 19-21, lines 29-33; Figures 1a and 3), and has a radial cam or working curve 6 with a rest area or zero lift range and a lift area or acceleration, and through this working curve 6 actuates a driven element or drag lever 1 which in turns actuates valve 3 ramp (column 3, lines 23-42), characterized in that the lifting lever 4 is mounted on a bearing or bolt and rail 8 with axis 17 that can be displaced in parallel on the adjustment curve through a joint or roller bearing 18 connected with the housing or cover 11 in a pendulum support manner (column 3, lines 1-7, lines 58-64; Figures 1a and 2).

Re claims 4 and 5, Morr discloses the rail 8 having multiple bar linkages or a slide or rail 19 (column 4, lines 1-24; Figures 3-5), the lifting lever 4 being displaced along a straight line and/or curve (column 1, lines 50-53).

Re claim 6, Morr discloses the lever 1 having a compensation element 2 arranged on it (Figure 1a).

Re claims 8-10, Morr discloses the adjustment of the rail 8 via rail 19 by using a motor 24 and a screw thread, or a hydraulic unit, stepper motor, etc. (column 4, lines 13-24).

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Re claims 11-16, and 22, Morrnn discloses the rail 8 being independently controlling two lifting levers 4a, 4b for each valve (column 3, lines 43-47), and extending the rails over all of the cylinders arranged in line (column 3, lines 55-57, lines 65-67).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 7, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrnn in view of Morrnn (U.S. Patent 6,481,399).

Morrnn ('903) discloses the valve lift device cited above, however, fails to specifically disclose the use of another cam or cam disk.

Morrnn ('399) teaches a valve lift device with a cam, cam disk, or eccentric shaft 5 driven by a stepper motor for displacing lifting lever 1 (column 3, lines 23-34; Figure 1). It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the teaching by Morrnn ('399) in the valve lift device of Morrnn ('903), since the use thereof would provide an alternate means of displacing the lifting lever reducing the overall structural size.

11. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being obvious over Morrnn ('903).

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Morrn ('903) discloses the valve lift device cited above, however, fails to specifically disclose rotational angle sensors on the flywheel or crankshaft and on the camshaft, and an engine management system for controlling torque peaks.

Morrn ('903) do suggest using path sensors 25 or using engine revolutions (column 4, lines 15-19) to control the torque of the device (column 3, lines 50-53). The use of crankshaft position sensors, camshaft position sensors, and an engine management system for torque control is well known in the art and a matter of obvious choice to one having ordinary skill depending on the specific control desired and complexity of the device. Moreover, there is nothing in the record which establishes that the application of such sensors and management systems represents a novel or unexpected result (See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of 4 patents.

- Baguena (U.S. Patent 4,572,118) discloses a variable valve timing mechanism with an alternating cam and lever system.

- Naumann (U.S. Patent 6,886,512) discloses a variable valve mechanism with an angled lever and planetary gear control.

- Schleusener et al. (U.S. Patent 6,907,852) disclose a valve operating device with an idling lift curve and a control path.

- Naumann (U.S. Patent 7,111,600) discloses a valve operating device with an angled lever and planetary gear control.

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Communication

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle M. Riddle whose telephone number is (571) 272-4864. The examiner can normally be reached on M-F (07:30-5:00) Second Friday Off.

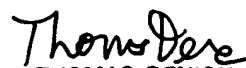
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kyle M. Riddle
Examiner
Art Unit 3748

kmr



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SUPERVISORY PATENT EXAMINER
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